PATENT

REMARKS

This paper is responsive to the Non-Final Office Action dated November 10, 2005. Claims 1, 3-16, 18-21, 62, 64-70, 72-74, 99, 100, 104 and 105 were examined. Claims 23-33, 35-61, 76-79, 81, 82, 84-88, 90-97, 103 and 106 are withdrawn from consideration. Applicant appreciates the Examiner's acknowledgement that claims 101 and 104 are generic.

Applicant appreciates the Examiner's courtesy during the telephone discussion of February 1, 2006, which confirmed the following. Applicant notified the Examiner that Bank (US 2002/0125065 A1) is not believed to be a reference as its filing date under 35 U.S.C. §102(e) is December 5, 2000, which is after the priority date of the instant application (December 23, 1999). That is because the 102(e) date for a continuation of an international application, when the international application was filed before November 29, 2000, is the U.S. filing date of the continuation application. However, the publication date of the international application to Bank (WO 99/65274) was 16 December 1999, which makes it potential prior art under 35 U.S.C. § 102(a) and contains similar subject matter to the U.S. publication. Accordingly, in the interests of advancing prosecution, Applicant will treat all references in the Office Action to the Bank U.S. publication as being to the international application (WO 99/65274).

Applicant also notes that the references to Park in the Office Action should be to Bank and the Applicant has treated all such references in the Office Action as being to Bank.

Claim Rejections – 35 USC §103

Claims 1, 3, 6-7, 21, 62, 67, 101-102, and 104-105 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Wood et al. (U.S. Patent No. 6,414,673 B1) in view of Bank (Pub. No. US 2002/0125065 A1) and Gill et al. (US Patent No. 5,831,934).

Claims 21, 67, 102, 105 are rejected under 35 U.S.C. §103(a) as being unpatentable over Wood et al. and Bank as applied to claims 1, 62, 101, 104, and further in view of Azima et al. (US Patent No. 6,580,799).

Claim 99 is rejected under 35 U.S.C. §103(a) as being unpatentable over Wood et al. in view of Bank.

Claim 100 is rejected under 35 U.S.C. §103(a) as being unpatentable over Wood et al. and Bank as applied to claim 99, and further in view of Gill et al.

Claims 8-9, 20, 66, and 69 are rejected under 35 U.S.C. §103(a) as being unpatentable over Wood et al., Bank and Gill et al., as applied to claims 1 and 62 in view of Knowles (US Patent No. 5,329,070).

Claim 4 is rejected under 35 U.S.C. §103(a) as being unpatentable over Wood et al., Bank and Gill et al., as applied to claim 3 in view of Weigers et al. (US Patent No. 5,856,820).

Claim 5 is rejected under 35 U.S.C. §103(a) as being unpatentable over Wood et al., Bank and Gill et al. as applied to claims 3 and 35 in view of Zook et al. (US Patent No. 6,246,638 B1).

Claims 12-14 are rejected under 35 U.S.C. §103(a) as being unpatentable over Wood et al., Bank and Gill et al. as applied to claim 1 in view of Takahashi et al. (US Patent No. 5,638,093).

Claim 15 is rejected under 35 U.S.C. §103(a) as being unpatentable over Wood et al., Bank and Gill et al. as applied to claim 1 in view of Tager et al. (US Patent No. 6,160,757).

Claim 16 is rejected under 35 U.S.C. §103(a) as being unpatentable over Wood et al., Bank, Gill et al. and Tager et al. as applied to claim 15 in view of Hoffberg et al. (US Patent No. 6,400,996 B1).

Claim 18 is rejected under 35 U.S.C. §103(a) as being unpatentable over Wood et al., Bank and Gill et al. as applied to claim 1 in view of Flowers (US Patent No. 6,160,757).

Claim 19 is rejected under 35 U.S.C. §103(a) as being unpatentable over Wood et al., Bank and Gill et al. as applied to claims 1, 101, and 52 in view of Kent (US Patent No. 5,986,224).

Claims 68 and 70 are rejected under 35 U.S.C. §103(a) as being unpatentable over Wood et al., Bank and Gill et al. as applied to claims 62 and 75 in view of Hotta et al. (US Patent No. 4,389,711).

Claims 64-65 and 73-74 are rejected under 35 U.S.C. §103(a) as being unpatentable over Wood et al., Bank and Gill et al. as applied to claims 62-63 and 75 in view of Koh et al. (US Patent No. 6,335,725 B1).

Claim 75 is rejected under 35 U.S.C. §103(a) as being unpatentable over Wood et al., Bank and Gill et al. as applied to claim 52 in view of Ketwich (US Patent No. 6,072,475).

Claims 10-11 are rejected under 35 U.S.C. §103(a) as being unpatentable over Wood et al., Bank and Gill et al. as applied to claims 1, 101 and 52 in view of Hoffberg et al. (US Patent No. 6,400,996 B1).

Rejection of Claim 1

With regards to claim 1, the Office Action states that Wood teaches a method of determining information relating to a passive contact sensitive device pointing to col. 2, lines 65-67. Applicant respectfully disagrees. Instead of a passive contact sensitive device, Wood teaches a transmitter pen location system that is an active system in which an ultrasonic transducer transmits an output signal from the transmitter pen to two or more external receivers. The pen in Wood outputs an ultrasound output signal to determine the location of the pen with respect to a writing surface of a whiteboard. See Abstract and Fig. 8. There is no teaching that the ultrasound output signals are transmitted through the writing surface.

The Office Action further states that Wood teaches providing a member capable of supporting wave vibration pointing to Fig. 1, item 12, and col. 4, line 66 to col. 5, line 3. However, that portion of Wood teaches a transmitter pen and a writing surface 12, which Wood teaches is typically a whiteboard. Wood teaches nothing regarding a member capable of supporting bending wave vibration.

Claim 1 further recites contacting the member at a discrete location to generate bending wave vibration in the member. The Office Action states that Wood teaches contacting the

member at a discrete location to generate wave vibration in the member pointing to Fig. 1, items 30, X1, Y1, and col. 5, lines 11-16. Applicant disagrees with that interpretation of Wood. Wood teaches at col. 5, lines 11-16 that the transducer element 28 has an output signal 16, which is used to determine the location of the pointing tip 36 of the transmitter pen 30a in relation to the writing area 14 of surface 12 (typically a whiteboard). Wood teaches that the output transducer 28 transmits a time dependent output signal to receiver 20a and 20b. X1, Y1 are the x and y location of the tip of the pen with respect to the writing surface. There is no teaching in Wood of contacting the member at a discrete location to generate bending wave vibration in the member. Nor has the Office Action identified what in Wood corresponds to the claimed member. Instead, Wood teaches that the pen 30 transmits an ultrasonic signal received by the receivers 20a and 20b.

Claim 1 further recites measuring the bending wave vibration in the member to determine a measured bending wave signal. The Office Action states that Wood teaches measuring the wave vibration in the member to determine the measured bending wave signal pointing to Fig. 1, items 20a, 20b, 16, 18, 30, Col 5, lines 9-27. However, as pointed out above, Wood doesn't measure bending wave vibration in the member but instead measures time dependent output signals transmitted from moveable output transducer 28 to the receivers 20a, 20b. See, e.g., col. 5, lines 20-25.

The Office Action states that Wood does not show bending wave vibration. Applicant points out that Wood also does not teach using vibration in a member (e.g., a touch panel) and sensors coupled to the touch panel to determine location of a contact.

In order to make up for the admitted deficiency of Wood, the Office Action relies on Bank. As pointed out above, Applicant is treating all references to the Bank U.S. publication as to the international application (WO 99/65274). Bank (WO 99/65274) teaches "a resonant panel-form acoustic device [that] comprises a resonant panel-form member and a vibration exciter mounted to the panel-form member to apply bending wave energy thereto to cause the member to resonate to produce an acoustic output." Bank at page 2, lines 20-23. Thus, Bank teaches a loudspeaker. There is no motivation to combine the loudspeaker of Bank with the pen

detection system of Wood. Further, even if combined, the combined references do not teach any of the first three limitations of claim 1.

Applicant respectfully submits that neither Wood nor Bank, alone or in combination, teach providing a member capable of supporting bending wave vibration, contacting the member at a discrete location to generate bending wave vibration in the member, and measuring the bending wave vibration in the member to determine a measured bending wave signal. As pointed out above, Wood teaches detection of location of a pen tip with respect to a whiteboard and Bank teaches a loudspeaker. There is no measuring of bending waves in either Wood or Bank nor contacting the member at a discrete location to generate bending wave vibration in the member. The fact that Bank teaches a vibration exciter mounted to the panel-form member to apply bending wave energy thereto does not make up for the deficiency of Wood.

Claim 1 also requires processing the measured bending wave signal to calculate information relating to the contact, including applying a correction to convert the measured bending wave signal to a propagation signal from a non-dispersive wave source.

The Office Action states that Wood and Bank do not show a correction to convert the measured bending wave signal to a propagation signal by fitting the data to a mathematical model of dispersion. The Office Action relies on Gill at col. 27, lines 58-63.

Gill describes a method for analyzing received wave signal data in an acoustic logging system. The purpose of Gill is to determine the phase velocity in the surrounding geophysical formation. The acoustic transmitters in Gill generate acoustic waves that include compression waves, shear waves, and undesirable tube waves. Col. 6, lines 32-34. The measured signal is filtered into a frequency band, such that the filtered signals result in a wavepacket using a Heisenberg filter. A Hilbert transform is used to generate both real and imaginary components of the wavepackets, which is useful for calculation of phase as a function of time. The method then calculates phase at multiple points for the wave packet. That information is used to estimate the time delay between different measurements of phase rather than one threshold measurement of time or arrival. The time of arrival estimation is then used to determine phase velocity, from which useful information is obtained about the surrounding geophysical medium.

Gill teaches that "the multiplicity of phase arrival data may be corrected for dispersion effects in the formation, for example by fitting the data to a mathematical model of dispersion, thereby providing improved measurements of true acoustic phase velocity." Col. 27, lines 58-63.

Applicant submits there is no motivation to combine Gill with Wood or Bank. Wood has no need to correct for dispersion effects taught by Gill because Wood is transmitting ultrasonic waves from the pen to sensors through the air. Bank never measures any waves (only generates them in the loudspeaker) and thus has no need for correcting for dispersion effects. Thus, even if Gill did teach the dispersion correction as recited in claim 1 (which the Applicant disputes), there is no motivation to combine Gill with Wood and Bank. Further, because there is no need for dispersion correction in Wood and Bank, the Office Action fails to show how combining Gill with Wood and Bank achieves the invention recited in claim 1.

Accordingly, in view of the above deficiencies of Wood, Bank and Gill, Applicant submits that claim 1 and all claims dependent thereon distinguish over Wood, Bank, and Gill.

Rejection of Claim 62

With regard to claim 62, the Office Action states that Wood teaches a passive contact sensitive device pointing to col. 2, lines 65-67. However, that portion of Wood teaches a transmitter pen location system that is an active system in which the pen is adapted to send a repeated output signal to two or more external receivers. The pen in Wood outputs ultrasonic acoustic waves to determine the location of the pen with respect to a writing surface of a whiteboard. See Abstract. Thus, Wood fails to teach a passive contact sensitive device.

The Office Action further states that Wood teaches a member capable of supporting wave vibration pointing to Fig. 1, item 12, and col. 4, line 66 to col. 5, line 3. However, that portion of Wood teaches a location detection system for a transmitter pen for use with a writing surface 12, which Wood teaches is typically a whiteboard. Wood teaches nothing regarding a member capable of supporting wave vibration, much less bending wave vibration as claimed.

The Office Action further states that Wood teaches at least one sensor coupled to the member for measuring wave vibration in the member, pointing to Fig. 1, items 20a and 20b, 18, 30, and col. 5, lines 9-27. Applicant respectfully disagrees. The receivers 20a and 20b detect

transmissions, which are taught to be ultrasound output signals from the signal transmitter pen 30a. See col. 5, lines 53-55. Thus, Wood fails to teach a sensor for measuring bending wave vibration in member as recited in claim 62.

Claim 62 further recites a processor operatively coupled to the at least one sensor for processing information relating to a contact made on a surface on the member from the generation of bending wave vibration in the member created by the contact and measured by the at least one sensor and for applying a correction to convert the measured bending wave signal to a propagation signal from a non-dispersive wave source.

The Office Action states that Wood teaches processing the measured wave signal to calculate information relating to the contact. However, the claim requires processing information relating to a contact made on a surface on the member from the generation of bending wave vibration in the member created by the contact. Wood does not process information relating to a contact but information related to location of the emitting pen. Nor does Wood teach anything about bending waves.

The Office Action admits that Wood does not disclose bending wave vibration. In order to make up for the admitted deficiency of Wood, the Office Action relies on Bank. The Office Action points to paragraph 8 of Bank (page 3, line 17 – page 4, line 2 of the international publication) which states:

> Although the invention provides that the structure of the vibration exciter affords basic support and stability for a resonant panel member, particularly for light-weight panel members, additional framing and/or suspension of the panel member may be provided if appropriate and desired, whether for stability or for defining/controlling desired vibration conditions in/for the panel member, or both, perhaps particularly in or as to contributions of peripheral/marginal regions, including from partial up to substantially full sealing of the panel member into a baffle. The availability of additional acoustic control by separating the front acoustic output from the rear acoustic output of the panel may be beneficial in certain applications

The Office Action states it would be obvious to use Bank in Wood to improve stability. Applicant respectfully submits that there is no motivation to provide the additional framing and/or suspension to improve stability described in Bank to the pen detection system of Wood. Applicant submits it is unclear how or why the pen detection system could use improved stability. Even if combined, the deficiencies of Wood pointed out above are not met by Bank.

Claim 62 further recites applying a correction to convert the measured bending wave signal to a propagation signal from a non-dispersive wave source. The Office Action states that Wood and Bank do not show a correction to convert the measured bending wave signal to a propagation signal by fitting the data to a mathematical model of dispersion. The Office Action relies on Gill at col. 27, lines 58-63.

Gill describes a method for analyzing received wave signal data in an acoustic logging system. The purpose of Gill is to determine the phase velocity in the surrounding geophysical formation. The acoustic transmitters in Gill generate acoustic waves that include compression waves, shear waves, and undesirable tube waves. Col. 6, lines 32-34. The measured signal is filtered into a frequency band, such that the filtered signals result in a wavepacket using a Heisenberg filter. A Hilbert transform is used to generate both real and imaginary components of the wavepackets, which is useful for calculation of phase as a function of time. The method then calculates phase at multiple points for the wave packet. That information is used to estimate the time delay between different measurements of phase rather than one threshold measurement of time or arrival. The time of arrival estimation is then used to determine phase velocity, from which useful information is obtained about the surrounding geophysical medium.

Gill teaches that "the multiplicity of phase arrival data may be corrected for dispersion effects in the formation, for example by fitting the data to a mathematical model of dispersion, thereby providing improved measurements of true acoustic phase velocity." Col. 27, lines 58-63.

Applicant submits there is no motivation to combine Gill with Wood or Bank. Wood has no need to correct for dispersion effects as taught by Gill because Wood is transmitting ultrasonic waves from the pen to sensors through the air. Bank never measures any waves (only generates them in the loudspeaker) and thus has no need for correcting for dispersion effects. Thus, even if Gill did teach the dispersion correction as recited in claim 62 (which the Applicant

disputes), there is no motivation to combine Gill with Wood and Bank. Further, because there is no need for dispersion correction in Wood and Bank, the Office Action fails to show how combining Gill with Wood and Bank achieves the invention recited in claim 62. Further, Gill teaches determining time of flight over a narrow frequency band in order to obtain phase velocity of a structure, not information related to the contact in the member that generated the bending wave vibration that is measured.

In view of the above shortcomings in Wood that are not made up for in either Bank or Gill, Applicant submits that claim 62 and all claims dependent thereon distinguish over Wood, Bank, and Gill, alone or in combination.

Rejection of Claim 101

With regards to claim 101, the Office Action states that Wood teaches a method of determining information relating to a contact on a contact sensitive device pointing to col. 2, lines 65-67. As pointed out above, Wood fails to teach a contact sensitive device. Further, col. 2, lines 65-67 of Wood teaches a transmitter pen location system in which a transducer in the pen transmits an output signal to two or more external receivers. The pen in Wood outputs acoustic waves to determine the location of the pen with respect to a writing surface of a whiteboard. See Abstract. Thus, Wood fails to teach determining information relating to a contact, only to location of the pen.

Claim 101 further recites contacting a member capable of supporting bending waves to produce a change in bending wave vibration in the member. The Office Action states that Wood teaches contacting the member capable of supporting waves to produce a change in wave vibration of the member pointing to Fig. 1, items 30, X1, Y1, col. 5, lines 11-16. However, Wood teaches at col. 5, lines 11-16 that the transducer element 28 has an output signal 16, which is used to determine the location of the pointing tip 36 of the transmitter pen 30a in relation to the writing area 14 of surface 12 (typically a whiteboard). Wood teaches that the output transducer 28 <u>transmits</u> a time dependent output signal to receiver 20a and 20b. X1, Y1 are the x and y location of the tip of the pen with respect to the writing surface. There is no teaching in Wood of contacting a member capable of supporting bending waves to produce a change in bending wave vibration in the member. Instead, Wood teaches that the pen 30 transmits an

ultrasonic signal received by the receivers 20a and 20b so the location of the pen can be determined.

Claim 101 further recites measuring the changed bending wave vibration in the member to determine a measured bending wave signal. The Office Action states that Wood teaches measuring the wave vibration in the member to determine a measured bending wave signal pointing to Fig. 1, items 20a, 20b, 16, 18, 30, Col 5, lines 9-27. However, as pointed out above Wood doesn't measure wave vibration in the member but instead transmits time dependent output signals from moveable output transducer 28 in the pen to the receivers 20a, 20b. See, e.g., col. 5, lines 20-25.

Although the Office Action states the Wood teaches processing the measured wave signal, since Wood does not measure the claimed wave vibration in the member, Wood cannot teach this limitation either.

The Office Action states that Wood does not show bending wave vibration.

In order to make up for the admitted deficiency of Wood, the Office Action relies on Bank. Bank (WO 99/6527) teaches "a resonant panel-form acoustic device [that] comprises a resonant panel-form member and a vibration exciter mounted to the panel-form member to apply bending wave energy thereto to cause the member to resonate to produce an acoustic output." Bank at page 2, lines 20-23. Thus, Bank teaches a loudspeaker. There is no motivation to combine the loudspeaker of Bank with the pen detection system of Wood. Further, even if combined, the combined references do not teach measuring the changed bending wave vibration as required in claim 101

Thus, Bank fails to make up for the deficiencies of Wood pointed out above.

Claim 101 further recites applying a correction to convert the measured bending wave signal to a propagation signal from a non-dispersive wave source. The Office Action states that Wood and Bank do not show a correction to convert the measured bending wave signal to a propagation signal by fitting the data to mathematical model of dispersion. The Office Action relies on Gill at col. 27, lines 58-63.

Applicant submits there is no motivation to combine Gill with Wood or Bank. Wood has no need to correct for dispersion effects taught by Gill because Wood is transmitting ultrasonic waves from the pen to sensors through the air. Bank never measures any waves (only generates them in the loudspeaker) and thus has no need for correcting for dispersion effects. Thus, even if Gill did teach the dispersion correction as recited in claim 1 (which the Applicant disputes), there is no motivation to combine Gill with Wood and Bank. Further, because there is no need for dispersion correction in Wood and Bank, the Office Action fails to show how combining Gill with Wood and Bank achieves the invention recited in claim 101. Further, Gill teaches determining time of flight over a narrow frequency band in order to obtain phase velocity of a structure, not information related to the contact in the member that generated the bending wave vibration that is measured.

Rejection of Claim 104

With regards to claim 104, the Office Action states that Wood teaches a passive contact sensitive device pointing to col. 2, lines 65-67. However, Wood teaches a transmitter pen location system in which an ultrasonic transducer transmits an output signal from the transmitter pen to two or more external receivers. The pen in Wood outputs airborne acoustic waves to determine the location of the pen with respect to a writing surface of a whiteboard. See Abstract. Thus, Wood fails to teach a contact sensitive device as recited in claim 104.

The Office Action further states that Wood teaches a member capable of supporting wave vibration relying on Fig. 1, item 12, and col. 4, line 66 to col. 5, line 3. However, that portion of Wood teaches a location detection system for a transmitter pen for use with a writing surface 12, which Wood teaches is typically a whiteboard. Wood teaches nothing regarding a member capable of supporting wave vibration, much less bending wave vibration as claimed.

The Office Action further states that Wood teaches at least one sensor coupled to the member for measuring wave vibration in the member, relying on Fig. 1, items 20a and 20b, 18, 30, and col. 5, lines 9-27. Applicant respectfully disagrees that Wood teaches a sensor for measuring wave vibration in the member. In Wood, the receivers 20a and 20b detect transmissions, which are ultrasound output signals from the signal transmitter pen 30a. See col.

5, lines 53-55. Thus, Wood fails to teach a sensor for measuring bending wave vibration in member as recited in claim 104.

Claim 104 further recites a processor operatively coupled to the at least one sensor for processing information relating to a contact made on a surface on the member from the generation of bending wave vibration in the member caused by the contact and measured by the at least one sensor and for applying a correction to convert the measured bending wave signal to a propagation signal from a non-dispersive wave source.

The Office Action states that Wood teaches processing the measured wave signal to calculate information relating to the contact. However, the claim requires processing information relating to a contact made on a surface on the member from the generation of bending wave vibration in the member caused by the contact. Wood does not process information relating to a contact but information related to location of the emitting pen. Nor does Wood teach anything about bending waves as claimed.

The Office Action states that Wood fails to teach bending wave vibration. In order to make up for the admitted deficiency of Wood, the Office Action relies on Bank. Bank (WO 99/6527) teaches "a resonant panel-form acoustic device [that] comprises a resonant panel-form member and a vibration exciter mounted to the panel-form member to apply bending wave energy thereto to cause the member to resonate to produce an acoustic output." Bank at page 2, lines 20-23. Thus, Bank teaches a loudspeaker. There is no motivation to combine the loudspeaker of Bank with the pen detection system of Wood. The Office Action states it would be obvious to use Bank in Wood to improve stability. Applicant respectfully submits that there is no motivation to provide additional framing and/or suspension for the loudspeaker as described in Bank to the pen detection system of Wood. Even if combined, the combined references fail to teach at least one sensor for measuring bending wave vibration in the member.

Thus, Bank fails to make up for the deficiencies of Wood.

Claim 104 further recites applying a correction to convert the measured bending wave signal to a propagation signal from a non-dispersive wave source. The Office Action states that Wood and Bank do not show a correction to convert the measured bending wave signal to a

propagation signal from a non-dispersive wave source. The Office Action relies on Gill at col. 27, lines 58-63 to make up for the deficiency in Wood and Bank.

Applicant submits there is no motivation to combine Gill with Wood or Bank. Wood has no need to correct for dispersion effects in a geologic formation as taught by Gill because Wood is transmitting ultrasonic waves from the pen to sensors through the air. Bank never measures any waves (only generates them in the loudspeaker) and thus has no need for correcting for dispersion effects. Thus, even if Gill did teach the dispersion correction as recited in claim 104 (which the Applicant disputes), there is no motivation to combine Gill with Wood and Bank. Further, because there is no need for dispersion correction in Wood and Bank, the Office Action fails to show how combining Gill with Wood and Bank achieves the invention recited in claim 104.

In view of the above shortcomings in Wood, that are not made up for in either Bank and Gill, Applicant submits that claim 104 and all claims dependent thereon distinguish over Wood, Bank, and Gill, alone or in combination.

Rejection of Claim 99

Claim 99 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Wood in view of Bank. With regards to claim 99, the Office Action states that Wood teaches a method of determining information relating to a passive contact sensitive device pointing to col. 2, lines 65-67. However, Wood teaches a transmitter pen location system that is an active system in which an ultrasonic transducer transmits an output signal from the transmitter pen to two or more external receivers. The pen in Wood outputs airborne acoustic waves to determine the location of the pen with respect to a writing surface of a whiteboard. See Abstract. Thus, the Wood system is active, not passive.

The Office Action further states that Wood teaches providing a member capable of supporting wave vibration pointing to Fig. 1, item 12, and col. 4, line 66 to col. 5, line 3. However, that portion of Wood teaches a transmitter pen and a writing surface 12, which Wood teaches is typically a whiteboard. Wood teaches nothing regarding a member capable of

supporting bending wave vibration. Instead, Wood teaches a whiteboard or other writing surface.

Claim 99 further recites contacting the member to generate bending wave vibration in the member. The Office Action states that Wood teaches contacting the member to generate wave vibration in the member pointing to Fig. 1, items 30, X1, Y1, col. 5, lines 11-16. However, Wood teaches at col. 5, lines 11-16 that the transducer element 28 has an output signal 16, which is used to determine the location of the pointing tip 36 of the transmitter pen 30a in relation to the writing area 14 of surface 12 (typically a whiteboard). Wood teaches that the output transducer 28 transmits a time dependent output signal to receiver 20a and 20b. X1, Y1 are the x and y location with respect to the writing surface of the tip of the pen. There is no teaching in Wood of contacting the member to generate bending wave vibration in the member. Instead, Wood teaches that the pen 30 transmits an ultrasonic signal received by the receivers 20a and 20b.

Claim 99 further recites measuring the bending wave vibration in the member to determine a measured bending wave signal. The Office Action states that Wood teaches measuring the wave vibration in the member to determine the measured bending wave signal pointing to Fig. 1, items 20a, 20b, 16, 18, 30, Col 5, lines 9-27. However, as pointed out above Wood doesn't measure wave vibration of any sort in the member but instead transmits time dependent output signals from moveable output transducer 28 to the receivers 20a, 20b. See, e.g., col. 5, lines 20-25.

The Office Action states that Wood does not show bending wave vibration. Applicant points out that Wood also does not teach providing a member capable of supporting bending wave vibration, contacting the member to generate bending wave vibration in the member by frictional movement of the contact, or measuring the bending wave vibration in the member to determine a measured bending wave signal.

In order to make up for the admitted deficiency of Wood, the Office Action relies on Bank. Bank (WO 99/6527) teaches "a resonant panel-form acoustic device [that] comprises a resonant panel-form member and a vibration exciter mounted to the panel-form member to apply bending wave energy thereto to cause the member to resonate to produce an acoustic output."

Bank at page 2, lines 20-23. Thus, Bank teaches a loudspeaker. There is no motivation to combine the loudspeaker of Bank with the pen detection system of Wood. Further, even if combined, the combined references do not teach any of the first three limitations of claim 99. Thus, Applicant submits that claim 99 and all claims dependent thereon distinguish over Wood and Bank.

Summary

All of the independent claims have been shown to distinguish over the references as applied. Thus, Applicant respectfully submits that all claims, including any currently withdrawn claims dependent on those independent claims are in condition for allowance and a Notice of Allowance to that effect is respectfully solicited. Nonetheless, if any issues remain that could be more efficiently handled by telephone, the Examiner is requested to call the undersigned at the number listed below.

CERTIFICATE OF MAILING OR TRANSMISSION

I hereby certify that, on the date shown below, this correspondence is being

☐ deposited with the US Postal Service with sufficient postage as first class mail and addressed as shown above.

☒ facsimile transmitted to the US Patent and Trademark Office.

Mark Zagorin 2/10/06

Mark Zagorin Date

EXPRESS MAIL LABEL: ____________________

Respectfully submitted,

Mark Zagorin

Mark Zagorin, Reg. No. 36,067
Attorney for Applicant(s)
(512) 338-6311 (direct)
(512) 338-6300 (main)
(512) 338-6301 (fax)